

# Refine Search

## Search Results -

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L6 and L5	1

Database:

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US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

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L7

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## Search History

DATE: Monday, July 17, 2006 [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u> side by side	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
	<i>DB=USPT; PLUR=YES; OP=OR</i>		
<u>L7</u>	L6 and l5	1	<u>L7</u>
<u>L6</u>	dahlqvist.in.	23	<u>L6</u>
<u>L5</u>	L4 and l3	8	<u>L5</u>
<u>L4</u>	L2 and (medium chain fatty acid or hydroxylated fatty acid or epoxygenated fatty acid)	160187	<u>L4</u>
<u>L3</u>	L2 and (PDAT)	8	<u>L3</u>
<u>L2</u>	L1 and (transgenic cell or organism)	197751	<u>L2</u>
<u>L1</u>	(triacylglycerol production)	805305	<u>L1</u>

END OF SEARCH HISTORY

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## Search Results - Record(s) 1 through 8 of 8 returned.

### ☐ 1. Document ID: US 7053269 B2

L5: Entry 1 of 8

File: USPT

May 30, 2006

US-PAT-NO: 7053269  
DOCUMENT-IDENTIFIER: US 7053269 B2

TITLE: Phospholipid:diacylglycerol acyltransferases

DATE-ISSUED: May 30, 2006

#### PRIOR-PUBLICATION:

DOC-ID	DATE
US 20030200563 A1	October 23, 2003

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cahoon; Edgar B.	Webster Grove	MO		US

US-CL-CURRENT: 800/295; 435/183, 435/252.3, 435/320.1, 435/419, 435/468, 435/6, 435/69.1,  
530/370, 536/23.6, 800/278

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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### ☐ 2. Document ID: US 6894205 B2

L5: Entry 2 of 8

File: USPT

May 17, 2005

US-PAT-NO: 6894205  
DOCUMENT-IDENTIFIER: US 6894205 B2

TITLE: Assay for toxin induced neuronal degeneration and viability in C. elegans

DATE-ISSUED: May 17, 2005

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Blakely; Randy D.	Brentwood	TN		
Nass; Richard	Nashville	TN		
Miller; David	Brentwood	TN		

US-CL-CURRENT: 800/3; 800/13

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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### ☐ 3. Document ID: US 6822141 B2

L5: Entry 3 of 8

File: USPT

Nov 23, 2004

US-PAT-NO: 6822141  
DOCUMENT-IDENTIFIER: US 6822141 B2

TITLE: Diacylglycerol acyl transferase proteins

DATE-ISSUED: November 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lardizabal; Kathryn Dennis	Woodland	CA		
Thompson; Gregory A.	Clarkston	WA		
Hawkins; Deborah	Davis	CA		

US-CL-CURRENT: 800/281; 435/419, 536/23.1, 536/23.2, 536/23.6, 536/23.7, 800/288, 800/298

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NAME	Draw Desc	Ima
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☐ 4. Document ID: US 6791008 B1

L5: Entry 4 of 8

File: USPT

Sep 14, 2004

US-PAT-NO: 6791008  
DOCUMENT-IDENTIFIER: US 6791008 B1

TITLE: Use of a class of enzymes and their encoding genes to increase the oil content in transgenic organisms

DATE-ISSUED: September 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Banas; Antoni	Siedlce			PL
Sandager; Line	Copenhagen			DK
St.ang.h1; Ulf	Uppsala			SE
Dahlqvist; Anders	Furulund			SE
Lenman; Marit	Lund			SE
Ronne; Hans	Uppsala			SE
Stymne; Sten	Svalov			SE

US-CL-CURRENT: 800/281; 435/224, 435/471, 435/483, 536/23.1, 536/23.2, 536/23.7, 800/278, 800/298, 800/306

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NAME	Draw Desc	Ima
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☐ 5. Document ID: US 6545987 B1

L5: Entry 5 of 8

File: USPT

Apr 8, 2003

US-PAT-NO: 6545987  
DOCUMENT-IDENTIFIER: US 6545987 B1

TITLE: Method and service switching point for requesting information during incoming calls to a subscriber in a communications network

DATE-ISSUED: April 8, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Becher; Reinhard	Munchen			DE

US-CL-CURRENT: 370/328; 379/221.12, 455/435.2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 6. Document ID: US 6120758 A

L5: Entry 6 of 8

File: USPT

Sep 19, 2000

US-PAT-NO: 6120758

DOCUMENT-IDENTIFIER: US 6120758 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Preservative system for topically applied products

DATE-ISSUED: September 19, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Siddiqui; Mukhtar	San Ramon	CA		
Flores; Ener H.	Hayward	CA		
Basa; Evangeline R.	Hayward	CA		

US-CL-CURRENT: 424/78.02; 424/401, 424/404, 514/844, 514/887, 514/938

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 7. Document ID: US 5828814 A

L5: Entry 7 of 8

File: USPT

Oct 27, 1998

US-PAT-NO: 5828814

DOCUMENT-IDENTIFIER: US 5828814 A

TITLE: Reduced cost high resolution real time raster image processing system and method

DATE-ISSUED: October 27, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cyman; Theodore F.	Grand Island	NY		
Kernin; Kevin P.	Grand Island	NY		
Recchione; Robert J.	Niagara Falls	NY		
Treis; Anthony L.	North Tonawanda	NY		

US-CL-CURRENT: 358/1.2; 358/1.13

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 8. Document ID: US 5312734 A

L5: Entry 8 of 8

File: USPT

May 17, 1994

TITLE: CDNA encoding a dopamine transporter

DATE-ISSUED: May 17, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Uhl; George R.	Towson	MD		
Kuhar; Michael J.	Baltimore	MD		
Shimada; Shoichi	Baltimore	MD		
Kitayama; Shigeo	Baltimore	MD		
Patel; Amrat	Baltimore	MD		
Lin; Chien-Liang	Baltimore	MD		

US-CL-CURRENT: 435/69.1; 435/2, 435/30, 435/320.1, 435/365, 435/4, 435/41, 435/6,  
530/350, 530/387.9, 530/388.22, 530/389.1, 530/395, 536/23.1, 536/23.4, 536/23.5

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	IMC	Draw Desc	Imgs
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Terms	Documents
L4 and L3	8

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## Search Results - Record(s) 1 through 10 of 23 returned.

### ☐ 1. Document ID: US 6791008 B1

L6: Entry 1 of 23

File: USPT

Sep 14, 2004

US-PAT-NO: 6791008  
DOCUMENT-IDENTIFIER: US 6791008 B1

TITLE: Use of a class of enzymes and their encoding genes to increase the oil content in transgenic organisms

DATE-ISSUED: September 14, 2004

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Banas; Antoni	Siedlce			PL
Sandager; Line	Copenhagen			DK
St.ang.h1; Ulf	Uppsala			SE
Dahlqvist; Anders	Furulund			SE
Lenman; Marit	Lund			SE
Ronne; Hans	Uppsala			SE
Stymne; Sten	Svalov			SE

US-CL-CURRENT: [800/281](#), [435/224](#), [435/471](#), [435/483](#), [536/23.1](#), [536/23.2](#), [536/23.7](#), [800/278](#), [800/298](#), [800/306](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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### ☐ 2. Document ID: US 6524900 B2

L6: Entry 2 of 23

File: USPT

Feb 25, 2003

US-PAT-NO: 6524900  
DOCUMENT-IDENTIFIER: US 6524900 B2

TITLE: Method concerning a junction barrier Schottky diode, such a diode and use thereof

DATE-ISSUED: February 25, 2003

#### INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dahlqvist; Fanny	Johanneshov			SE
Lendenmann; Heinz	Stocksund			SE
Hermansson; Willy	Vaster.ang.s			SE

US-CL-CURRENT: [438/167](#), [257/E21.359](#), [257/E27.051](#), [257/E29.104](#), [257/E29.338](#), [438/237](#), [438/328](#), [438/431](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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☐ 3. Document ID: US 6333448 B1

L6: Entry 3 of 23

File: USPT

Dec 25, 2001

US-PAT-NO: 6333448

DOCUMENT-IDENTIFIER: US 6333448 B1

TITLE: Plant enzyme and use thereof

DATE-ISSUED: December 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bafor; Maureen	Benin City			NG
Banas; Antoni	08-110 Siedlce			PL
Dahlgvist; Anders	S-244 66 Furulund			SE
Gummeson; Per-Olov	S-227 38 Lund			SE
Lee; Michael	S-231 97 Klagstorp			SE
Sjodal; Staffan	S-756 50 Uppsala			SE
Stymne; Sten	S-268 90 Svalov			SE
Lenman; Marit	S-22359 Lund			SE

US-CL-CURRENT: 800/295; 435/254.1, 435/255.1, 435/419, 435/69.1, 536/23.6, 800/281

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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☐ 4. Document ID: US 6306357 B1

L6: Entry 4 of 23

File: USPT

Oct 23, 2001

US-PAT-NO: 6306357

DOCUMENT-IDENTIFIER: US 6306357 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Process and apparatus for absorbing hydrogen sulphide

DATE-ISSUED: October 23, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Simonson; Erik	Vaxjo			SE
Wallin; Mats	Lund			SE
Bengtsson; Sune	Vaxjo			SE
Dahlgvist; Erik	Vaster.ang.s			SE

US-CL-CURRENT: 423/232; 162/51, 422/169, 422/170, 422/171, 422/181, 423/220

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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☐ 5. Document ID: US PP09474 P

L6: Entry 5 of 23

File: USPT

Mar 12, 1996

US-PAT-NO: PP09474

DOCUMENT-IDENTIFIER: US PP09474 P

TITLE: Poinsettia plant named 'Nobelstar'

DATE-ISSUED: March 12, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dahlqvist</u> -Olsson; Eva	Malmö			SE

US-CL-CURRENT: PLT/307

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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☐ 6. Document ID: US 5335865 A

L6: Entry 6 of 23

File: USPT

Aug 9, 1994

US-PAT-NO: 5335865

DOCUMENT-IDENTIFIER: US 5335865 A

\*\* See image for Certificate of Correction \*\*

TITLE: Two-stage variable intensity refiner

DATE-ISSUED: August 9, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kohler; Gregory R.	Williamsport	PA		
Lahner, III; William F.	Graz			AT
Munster; Heinrich F.	Vienna			AT
<u>Dahlqvist</u> ; Karl T. G.	Norrköping			SE

US-CL-CURRENT: 241/28; 241/261.2, 241/261.3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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☐ 7. Document ID: US PP08319 P

L6: Entry 7 of 23

File: USPT

Jul 27, 1993

US-PAT-NO: PP08319

DOCUMENT-IDENTIFIER: US PP08319 P

TITLE: Poinsettia plant 'Lilo White'

DATE-ISSUED: July 27, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dahlqvist</u> ; Kjell-Ingvar	Höllviken			SE

US-CL-CURRENT: PLT/304

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMK	Draw Desc	Ima
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☐ 8. Document ID: US 4931292 A



US-PAT-NO: 4931292  
DOCUMENT-IDENTIFIER: US 4931292 A

TITLE: Method of preparing iron(III) phosphate compounds for iron fortification of food products

DATE-ISSUED: June 5, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Torstensson; Lars-Gunnar	Kungälv			SE
Dahlqvist; Per-Arne	Svanesund			SE
Benjelloun; Malika	Goteborg			SE

US-CL-CURRENT: 426/2; 426/648, 426/74

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	ROME	Draw Desc	Ima
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☐ 9. Document ID: US 4866795 A

L6: Entry 9 of 23

File: USPT

Sep 19, 1989

US-PAT-NO: 4866795  
DOCUMENT-IDENTIFIER: US 4866795 A

TITLE: Piece of seating furniture convertible to bed

DATE-ISSUED: September 19, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dahlqvist; Bjarne	Pirilo			FI

US-CL-CURRENT: 5/18.1; 297/111, 297/68, 5/22

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	ROME	Draw Desc	Ima
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☐ 10. Document ID: US 4727566 A

L6: Entry 10 of 23

File: USPT

Feb 23, 1988

US-PAT-NO: 4727566  
DOCUMENT-IDENTIFIER: US 4727566 A

TITLE: Method to test the function of an adaptive echo canceller

DATE-ISSUED: February 23, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dahlqvist; Ingemar E.	Johanneshov			SE

US-CL-CURRENT: 379/3; 379/406.05, 379/406.08

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dahlqvist.in.	23

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NEWS 10 JUN 02 The first reclassification of IPC codes now complete in  
INPADOC  
NEWS 11 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and  
and display fields  
NEWS 12 JUN 28 Price changes in full-text patent databases EPFULL and PCTFULL  
NEWS 13 JUL 07 Coverage of Research Disclosure reinstated in DWPI  
NEWS 14 JUL 11 CHEMSAFE reloaded and enhanced  
NEWS 15 JUL 14 FSTA enhanced with Japanese patents  
  
NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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=> s PDAT

L1 872 PDAT

=> e dahlqvist, a/au

E1	4	DAHLQVIST ULLA/AU
E2	1	DAHLQVIST VERA/AU
E3	0 -->	DAHLQVIST, A/AU
E4	1	DAHLREN R A/AU
E5	1	DAHLROTH S/AU
E6	2	DAHLROTH S L/AU
E7	7	DAHLROTH SUE LI/AU
E8	1	DAHLRUP H/AU
E9	1	DAHLRUP PETERSEN K/AU
E10	1	DAHLS S/AU
E11	10	DAHLSEID J N/AU
E12	1	DAHLSEID JEFFREY/AU

=> s (triacylglycerol production)

L2 135 (TRIACYLGLYCEROL PRODUCTION)

=> s l2 and (medium chain fatty acid or hydroxylated fatty acid or epoxygenated fatty acid)

6 FILES SEARCHED...

L3 0 L2 AND (MEDIUM CHAIN FATTY ACID OR HYDROXYLATED FATTY ACID OR EPOXYGENATED FATTY ACID)

=> s l2 and l1

L4 40 L2 AND L1

=> d l4 ti abs ibib 1-15

L4 ANSWER 1 OF 40 MEDLINE on STN

TI The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production.

AB We have characterized three CoA-independent types of enzyme, phospholipases, phospholipid:diacylglycerol acyltransferases (PDATs) and cholinephosphotransferases, responsible for the removal of unusual fatty acids from phosphatidylcholine (PC) in microsomal preparations from developing oil seeds. The metabolism of sn-2-[(14)C]acyl-PC was monitored in microsomal preparations from various oilseeds having either medium-chain, acetylenic, epoxy or hydroxy fatty acids as their major fatty acids in the oil. The results indicate that PDAT plays a

major role in removing ricinoleic acid and vernolic acid from phospholipids in *Ricinus communis* and *Crepis palaestina* seeds, respectively. However, vernolic, crepenynic and capric acids are primarily removed from phospholipids by phospholipases in *Euphorbia lagascae*, *Crepis rubra* and elm seeds, respectively. Further, we show that significant PDAT activity is also present in vegetative tissues of *Arabidopsis thaliana*.

ACCESSION NUMBER: 2001301187 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 11171177  
TITLE: The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production.  
AUTHOR: Banas A; Dahlqvist A; Stahl U; Lenman M; Stymne S  
CORPORATE SOURCE: Scandinavian Biotechnology Research AB, SE-268 31 Svalov, Sweden.. antoni.banas@vv.slu.se  
SOURCE: Biochemical Society transactions, (2000 Dec) Vol. 28, No. 6, pp. 703-5.  
Journal code: 7506897. ISSN: 0300-5127.  
PUB. COUNTRY: England: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200105  
ENTRY DATE: Entered STN: 4 Jun 2001  
Last Updated on STN: 4 Jun 2001  
Entered Medline: 31 May 2001

L4 ANSWER 2 OF 40 USPATFULL on STN

TI Diacylglycerol acyl transferase proteins  
AB The invention provides diacylglycerol acyltransferase (DAGAT) proteins, wherein said proteins are active in the formation of triacylglycerol from fatty acyl and diacylglycerol substrates. In one aspect, *Mortierella ramanniana* DAGAT proteins have been isolated and have molecular weights of between approximately 36 and 37 kDa as measured by SDS-PAGE. The invention also provides novel DAGAT polynucleotide and polypeptide sequences and to methods of producing such polypeptides using recombinant techniques. In addition, methods are provided for using such sequences to alter triacylglycerol levels in plants and to treat diseases associated with altered DAGAT activity or expression.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:167771 USPATFULL  
TITLE: Diacylglycerol acyl transferase proteins  
INVENTOR(S): Lardizabal, Kathryn Dennis, Woodland, CA, UNITED STATES  
Thompson, Gregory A., Clarkston, WA, UNITED STATES  
Hawkins, Deborah, Davis, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003115632	A1	20030619
APPLICATION INFO.:	US 2002-208018	A1	20020731 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2002-121857, filed on 15 Apr 2002, PENDING Continuation of Ser. No. US 1999-345461, filed on 30 Jun 1999, ABANDONED		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-91631P	19980702 (60)
	US 1999-130829P	19990423 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	ARNOLD & PORTER, IP DOCKETING DEPARTMENT, RM 1126(b), 555 12TH STREET, N.W., WASHINGTON, DC, 20004-1206	

NUMBER OF CLAIMS: 48  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 29 Drawing Page(s)  
LINE COUNT: 4596  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 40 USPATFULL on STN

TI Diacylglycerol acyl transferase proteins

AB The invention provides diacylglycerol acyltransferase (DAGAT) proteins, wherein said proteins are active in the formation of triacylglycerol from fatty acyl and diacylglycerol substrates. In one aspect, *Mortierella ramanniana* DAGAT proteins have been isolated and have molecular weights of between approximately 36 and 37 kDa as measured by SDS-PAGE. The invention also provides novel DAGAT polynucleotide and polypeptide sequences and to methods of producing such polypeptides using recombinant techniques. In addition, methods are provided for using such sequences to alter triacylglycerol levels in plants and to treat diseases associated with altered DAGAT activity or expression.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:39274 USPATFULL  
TITLE: Diacylglycerol acyl transferase proteins  
INVENTOR(S): Lardizabal, Kathryn Dennis, Woodland, CA, UNITED STATES  
Thompson, Gregory A., Clarkston, WA, UNITED STATES  
Hawkins, Deborah, Davis, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003028923	A1	20030206
	US 6822141	B2	20041123
APPLICATION INFO.:	US 2002-121857	A1	20020415 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-345461, filed on 30 Jun 1999, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-91631P	19980702 (60)
	US 1999-130829P	19990423 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	ARNOLD & PORTER, IP DOCKETING DEPARTMENT, RM 1126(b), 555 12TH STREET, N.W., WASHINGTON, DC, 20004-1206	
NUMBER OF CLAIMS:	48	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	16 Drawing Page(s)	
LINE COUNT:	3416	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

TI The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production

AB We have characterized three CoA-independent types of enzyme, phospholipases, phospholipid:diacylglycerol acyltransferases (PDATs) and cholinephosphotransferases, responsible for the removal of unusual fatty acids from phosphatidylcholine (PC) in microsomal preps. from developing oil seeds. The metabolism of sn-2-[14C]acyl-PC was monitored in microsomal preps. from various oilseeds having either medium-chain, acetylenic, epoxy or hydroxy fatty acids as their major fatty acids in the oil. The results indicate that PDAT plays a major role in removing ricinoleic acid and vernolic acid from phospholipids in *Ricinus communis* and *Crepis palaestina* seeds, resp. However, vernolic, crepenynic and capric acids are primarily removed from phospholipids by phospholipases in *Euphorbia lagascae*, *Crepis rubra* and elm seeds, resp. Further, we show

that significant PDAT activity is also present in vegetative tissues of *Arabidopsis thaliana*.

ACCESSION NUMBER: 2001:145905 HCAPLUS  
DOCUMENT NUMBER: 134:307122  
TITLE: The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production  
AUTHOR(S): Banas, A.; Dahlqvist, A.; Stahl, U.; Lenman, M.; Stymne, S.  
CORPORATE SOURCE: Scandinavian Biotechnology Research AB, Svalov, SE-268 31, Swed.  
SOURCE: Biochemical Society Transactions (2000), 28(6), 703-705  
CODEN: BCSTB5; ISSN: 0300-5127  
PUBLISHER: Portland Press Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 40 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN  
TI Phospholipid diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content.  
AN 2000-665012 [64] WPIDS  
AB WO 200060095 A UPAB: 20060328  
NOVELTY - An enzyme catalyzing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol, is new.  
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:  
(1) a nucleotide sequence encoding the enzyme, or a partial nucleotide sequence corresponding to the full length nucleotide sequence that encodes the enzyme;  
(2) a gene construct comprising the nucleotide sequence operably linked to a heterologous nucleic acid;  
(3) a vector comprising the nucleotide sequence or the gene construct;  
(4) a transgenic cell or organism containing the nucleotide sequence and/or the gene construct and/or the vector;  
(5) a process for producing triacylglycerol comprising growing the transgenic cell organism under conditions where the nucleotide sequence is expressed; and  
(6) triacylglycerol produced by the process of (5).  
USE - The enzyme and the nucleotides encoding them are useful for producing triacylglycerol and/or triacylglycerol with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism.

Dwg.0/6

ACCESSION NUMBER: 2000-665012 [64] WPIDS  
DOC. NO. CPI: C2000-201465  
TITLE: Phospholipid diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content.  
DERWENT CLASS: C06 D16 D23 E17 P13 P14  
INVENTOR(S): BANAS, A; DAHLQVIST, A; LENMAN, M; RONNE, H; STAHL, U; STYMNE, S; LEDMAN, M  
PATENT ASSIGNEE(S): (BADI) BASF PLANT SCI GMBH  
COUNTRY COUNT: 91

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000060095	A2	20001012	(200064)*	EN	97
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL					
OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES					
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS					
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL					
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000038147	A	20001023	(200107)		
NO 2001004716	A	20011128	(200208)		
EP 1165803	A2	20020102	(200209)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI					
CZ 2001003529	A3	20020213	(200221)		
BR 2000009510	A	20020423	(200235)		
KR 2001112396	A	20011220	(200239)		
SK 2001001387	A3	20020604	(200247)		
HU 2002000480	A2	20020729	(200258)		
JP 2002541783	W	20021210	(200301)		90
CN 1362994	A	20020807	(200304)		
NZ 514227	A	20031219	(200404)		
MX 2001009577	A1	20030701	(200420)		
AU 777031	B2	20040930	(200480)		
RU 2272073	C2	20060320	(200620)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000060095	A2	WO 2000-EP2701	20000328
AU 2000038147	A	AU 2000-38147	20000328
NO 2001004716	A	WO 2000-EP2701	20000328
		NO 2001-4716	20010928
EP 1165803	A2	EP 2000-917001	20000328
		WO 2000-EP2701	20000328
CZ 2001003529	A3	WO 2000-EP2701	20000328
		CZ 2001-3529	20000328
BR 2000009510	A	BR 2000-9510	20000328
		WO 2000-EP2701	20000328
KR 2001112396	A	KR 2001-712623	20010929
SK 2001001387	A3	WO 2000-EP2701	20000328
		SK 2001-1387	20000328
HU 2002000480	A2	WO 2000-EP2701	20000328
		HU 2002-480	20000328
JP 2002541783	W	JP 2000-609586	20000328
		WO 2000-EP2701	20000328
CN 1362994	A	CN 2000-805998	20000328
NZ 514227	A	NZ 2000-514227	20000328
		WO 2000-EP2701	20000328
MX 2001009577	A1	WO 2000-EP2701	20000328
		MX 2001-9577	20010924
AU 777031	B2	AU 2000-38147	20000328
RU 2272073	C2	WO 2000-EP2701	20000328
		RU 2001-129499	20000328

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000038147	A Based on	WO 2000060095



EP 1165803	A2 Based on	WO 2000060095
CZ 2001003529	A3 Based on	WO 2000060095
BR 2000009510	A Based on	WO 2000060095
SK 2001001387	A3 Based on	WO 2000060095
HU 2002000480	A2 Based on	WO 2000060095
JP 2002541783	W Based on	WO 2000060095
NZ 514227	A Based on	WO 2000060095
MX 2001009577	A1 Based on	WO 2000060095
AU 777031	B2 Previous Publ.	AU 2000038147
	Based on	WO 2000060095
RU 2272073	C2 Based on	WO 2000060095

PRIORITY APPLN. INFO: US 2000-180687P 20000207; EP  
 1999-106656 19990401; EP  
 1999-111321 19990610

L4 ANSWER 6 OF 40 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 TI The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production.

AB We have characterized three CoA-independent types of enzyme, phospholipases, phospholipid:diacylglycerol acyltransferases (PDATs) and cholinephosphotransferases, responsible for the removal of unusual fatty acids from phosphatidylcholine (PC) in microsomal preparations from developing oil seeds. The metabolism of sn-2-(14C)acyl-PC was monitored in microsomal preparations from various oilseeds having either medium-chain, acetylenic, epoxy or hydroxy fatty acids as their major fatty acids in the oil. The results indicate that PDAT plays a major role in removing ricinoleic acid and vernolic acid from phospholipids in *Ricinus communis* and *Crepis palaestina* seeds, respectively. However, vernolic, crepenynic and capric acids are primarily removed from phospholipids by phospholipases in *Euphorbia lagascae*, *Crepis rubra* and elm seeds, respectively. Further, we show that significant PDAT activity is also present in vegetative tissues of *Arabidopsis thaliana*.

ACCESSION NUMBER: 2001:186346 BIOSIS

DOCUMENT NUMBER: PREV200100186346

TITLE: The involvement of phospholipid:diacylglycerol acyltransferases in triacylglycerol production.

AUTHOR(S): Banas, A. [Reprint author]; Dahlqvist, A.; Stahl, U.; Lenman, M.; Stymne, S.

CORPORATE SOURCE: Scandinavian Biotechnology Research AB, SE-268 31, Svalov, Sweden  
 antoni.banas@w.slu.se

SOURCE: Biochemical Society Transactions, (December, 2000) Vol. 28, No. 6, pp. 703-705. print.  
 CODEN: BCSTB5. ISSN: 0300-5127.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 20 Apr 2001

Last Updated on STN: 18 Feb 2002

L4 ANSWER 7 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24267 Protein DGENE

AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme

and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the Zea mays PDAT amino acid sequence.

ACCESSION NUMBER: AAB24267 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64445  
DESCRIPTION: Zea mays PDAT amino acid sequence SEQ ID NO:7b.

L4 ANSWER 8 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
AN AAB24266 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the yeast (*Saccharomyces cerevisiae*) PDAT amino acid sequence.

ACCESSION NUMBER: AAB24266 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64441  
DESCRIPTION: *Saccharomyces cerevisiae* PDAT amino acid sequence  
SEQ ID NO:2b.

L4 ANSWER 9 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24265 Protein DGENE

AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the yeast (*Saccharomyces cerevisiae*) PDAT ORF (open reading frame) amino acid sequence.

ACCESSION NUMBER: AAB24265 Protein DGENE

TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S

PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.

PATENT INFO: WO 2000060095 A2 20001012 97

APPLICATION INFO: WO 2000-EP2701 20000328

PRIORITY INFO: EP 1999-106656 19990401

EP 1999-111321 19990610

US 2000-180687 20000207

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-665012 [64]

CROSS REFERENCES: N-PSDB: AAC64440

DESCRIPTION: *Saccharomyces cerevisiae* PDAT ORF amino acid sequence SEQ ID NO:5a.

L4 ANSWER 10 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN

TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24264 Protein DGENE

AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an *Arabidopsis thaliana* PDAT amino acid sequence.

ACCESSION NUMBER: AAB24264 Protein DGENE

TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S

PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.

PATENT INFO: WO 2000060095 A2 20001012 97.

APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ  
ID NO:3a.

L4 ANSWER 11 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for transforming  
any cell or organism to increase oil content -  
AN AAB24263 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the transfer of fatty acids from  
phospholipids to diacylglycerol in the biosynthetic pathway for the  
production of triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are also useful  
for transforming any cell or organism in order to be expressed in this  
cell or organism and result in an altered, preferably increased oil  
content of this cell or organism. The present sequence represents an  
Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24263 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any cell or  
organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ  
ID NO:2a.

L4 ANSWER 12 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for transforming  
any cell or organism to increase oil content -  
AN AAB24262 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the transfer of fatty acids from  
phospholipids to diacylglycerol in the biosynthetic pathway for the  
production of triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are also useful  
for transforming any cell or organism in order to be expressed in this  
cell or organism and result in an altered, preferably increased oil  
content of this cell or organism. The present sequence represents the  
yeast (*Saccharomyces cerevisiae*) PDAT ORF (open reading frame)

amino acid sequence.

ACCESSION NUMBER: AAB24262 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Saccharomyces cerevisiae PDAT ORF amino acid sequence SEQ ID NO:1a.

L4 ANSWER 13 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24261 Protein DGENE

AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24261 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:15.

L4 ANSWER 14 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24260 Protein DGENE

AB The present invention describes an enzyme for catalysing (in an

acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24260 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:14.

L4 ANSWER 15 OF 40 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24259 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the Schizosaccharomyces pombe PDAT amino acid sequence.

ACCESSION NUMBER: AAB24259 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Schizosaccharomyces pombe PDAT amino acid sequence

SEQ ID NO:13.